

Notice of Allowability

Application No.

10/660,623

Applicant(s)

FLETCHER ET AL.

Examiner

Abolfazl Tabatabai

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on August 10, 2007.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

2. Authorization for this Examiner's amendment was given in a telephone interview with Applicant's Attorney (Mr. Brian L. Klock with registration # 36,570), on Wednesday September 19, 2007, without traverse.

3. In claim 18, line 4, after function insert --- $f(r) = \cos(a \log |r| + c)$ ---.

Drawings

4. The drawings were received on September 12, 2003. The Examiner accepts these drawings.

Reasons for Allowance

5. Based on applicant's arguments (pages 13-15) filed on August 10, 2007, with respect to claims 1-25 have been fully considered and are persuasive. As a result the art rejection of claims 1-8, 14-17 and 19-22 have been withdrawn. Therefore, claims 1-23 are allowable.

6. The following is an examiner's statement of reasons for allowance.

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The prior art of record fails to teach or suggest mark embedding and detection using projective transforms comprises (a) calculating a 1-D correlation between the each projective transform and said basis function and finding one or more peaks of said correlation, wherein the position of each of said peaks provides spatial parameters of one of said one or more embedded patterns in combination into other features and elements of claims 1,2,14,15 and 19; (b) multiplying the resampled transformed image with the transform of said basis function along radial lines to create a first result; inverse transforming said first result to the space domain using a one-dimensional transform to create a second result and finding one or more peaks of said second result, wherein the position of each of said peaks provides the spatial parameters of one of said one or more embedded patterns in combination into other features and elements of claims 7,16 and 21; (c) finding peaks of said correlation, each peak corresponding with one of said embedded patterns; and determining said transformations from the positions of said peaks and said parameters of said patterns embedded into said second image. in combination into other features and elements of claims 8, 17 and 22; (d) maintaining a basis function, said basis function being a substantially scale invariant one dimensional function excluding the function $f(r) = \cos(\alpha \log |r| + c)$ wherein α and c are constants in combination into other features and elements of claims 9, 18 and 23.

7. Claims 1-23 are allowed.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

Citation of Relevant Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ratnakar (U. S. 6,556,688 B1) discloses watermarking random zero-mean patches for printer tracing.

Luna et al (U. S. 6,542,541 B1) disclose method and apparatus for decoding MPEG video signals using multiple data transfer units.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (571) 272-7458.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Bhavesh Mehta, can be reached at (571) 272-7453. The fax phone number for organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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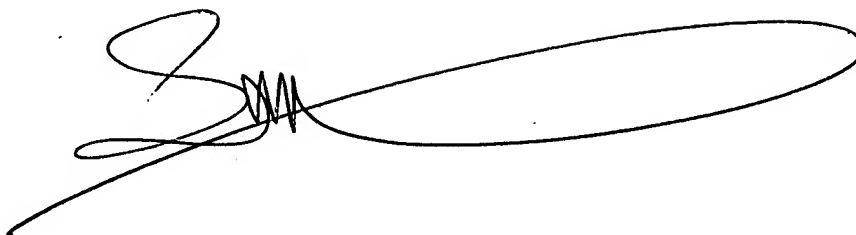
Abolfazl Tabatabai

Patent Examiner

Technology Division 2624

September 20, 2007

A. Tabatabai

A handwritten signature in black ink, consisting of a large, stylized 'S' followed by a series of vertical strokes and a long horizontal oval.

SAMIR AHMED
PRIMARY EXAMINER